Table from

pK_a *values in organic chemistry – making maximum use of the available data*
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Table 5. Examples of absolute and relative pK_a values of neutral and cationic acids in some solvents from refs [11,15,16,18,25,41,45–52]. All values are experimental unless noted otherwise.[a]

		MeCN	DCE	DMSO	H_2O	THF	C7	DME
Absolute pK_a values	Picric acid	11.00	44.6	-1.0	0.3	11.84		
	$C(CN)_2$=C(CN)OH	4.69	35.9					
	(2-$C_{10}F_7$)$_2$CHCN	19.32	53.0				-0.68	
	(C_6F_5)$_2$CHCN	21.10	55.7[b]	8.0			1.80	6.4
	9-C_6F_5-Octafluorofluorene	18.88	53.8				0.00	5.3
	(4-CF_3-C_6F_4)(C_6F_5)CHCN	18.14	52.3	4.9			-1.39	3.9
	(C_6H_5)(C_6F_5)CHCN	26.14		12.8				11.8
	Saccharin	14.57		4.0	1.8			
	2,4-(NO_2)$_2$-Phenol	16.66		5.4	4.10	16.94		
	HCl	10.30	45.2	-2.0[c]	-5.9[c]			
	HBr	5.5	40.6	-6.8[c]	-8.8[c]			
	HI	2.8	37.7	-10.9[c]	-9.5[c]			
	$HClO_4$	1.83	32.2	-14.9[c]	-15.2[c]	7.57		
	TfOH	2.60	33.7	-14.3[c]	-14.7[c]	7.83		
	Acetic acid	23.51		12.6	4.75	22.48		
	Benzoic acid	21.51		11.1	4.25	25.11		
	Aniline-H^+	10.62		3.59	4.60	5.2		
	Pyridine-H^+	12.53		3.45	5.25	5.5		
	Proton Sponge-H^+	18.62		7.47		11.1		
	DBU-H^+	24.34		13.9		16.6		
	TBD-H^+	26.03				19.4		
	t-BuP_1(dma)$_3$-H^+	26.98		15.7		18.8		
	t-BuP_1(pyrr)$_3$-H^+	28.42				20.2		
	Et_3N-H^+	18.63		9.0	10.70	12.5		
	TMG-H^+	23.30		13.2	13.60	15.5		
Relative pK_a values	Picric acid – $C(CN)_2$=C(CN)OH	6.31	8.70					
	(2-$C_{10}F_7$)$_2$CHCN – Picric acid	8.32	8.40					
	(2-$C_{10}F_7$)$_2$CHCN – $C(CN)_2$=C(CN)OH	14.63	17.10					
	Saccharin – Picric acid	3.57		5.00	1.50			
	2,4-(NO_2)$_2$-Phenol – Saccharin	2.09		1.40	2.30			
	2,4-(NO_2)$_2$-Phenol – Picric acid	5.66		6.40	3.80	5.1		
	(C_6F_5)$_2$CHCN – (4-CF_3-C_6F_4)(C_6F_5)CHCN	2.96	3.4	3.10			3.19	2.50

$(C_6F_5)_2CHCN$ – 9-C_6F_5-Octafluorofluorene	2.22					1.80	1.10
$(2\text{-}C_{10}F_7)_2CHCN$ – 9-C_6F_5-Octafluorofluorene	0.44	-0.80				-0.68	
Picric acid – HCl	0.70	-0.60	1.00	6.20			
Picric acid – HBr	5.50	4.00	5.80	9.10			
Picric acid – HI	8.20	6.90	9.90	9.80			
HCl – HI	7.50	7.50	8.90	3.60			
HCl – $HClO_4$	8.47	13.00	12.90	9.30			
HCl – TfOH	7.70	11.50	12.30	8.80			
TfOH – $HClO_4$	0.77		0.6	0.5	0.26		
Acetic acid - Picric acid	12.51		13.60	4.45	10.54		
Benzoic acid - Picric acid	10.51		12.10	3.95	13.17		
Acetic acid - Benzoic acid	2.00		1.50	0.50	2.63		
Benzoic acid - HCl	11.21		13.10	10.15			
DBU-H^+ – Proton Sponge-H^+	5.72		6.4		5.50		
Proton Sponge-H^+ – Pyridine-H^+	6.09		4.0		5.60		
Pyridine-H^+ – Aniline-H^+	1.91		-0.1	0.65	0.30		
Proton Sponge-H^+ – Aniline-H^+	8.00		3.9		5.90		
DBU-H^+ – Pyridine-H^+	11.81		10.5		11.10		
DBU-H^+ – Aniline-H^+	13.72		10.3		11.40		
t-$BuP_1(pyrr)_3$-H^+ – DBU-H^+	4.08				3.60		
t-$BuP_1(dma)_3$-H^+ – DBU-H^+	2.64		1.8		2.20		
t-$BuP_1(pyrr)_3$-H^+ – TBD-H^+	2.39				0.80		
t-$BuP_1(dma)_3$-H^+ – TBD-H^+	0.95				-0.60		
Et_3N-H^+ – Pyridine-H^+	6.10		5.5	5.45	7.00		
Et_3N-H^+ – Aniline-H^+	8.01		5.4	6.10	7.30		
t-$BuP_1(dma)_3$-H+ - TMG-H+	3.68		2.50		3.30		
DBU-H+ - TMG-H+	1.04		0.70		1.10		

[a] Abbreviations and acronyms: **C7** is Heptane; TfOH [1493-13-6] is trifluoromethanesulfonic acid, CF_3SO_3H; Picric acid is 2,4,6-trinitrophenol; Proton Sponge [20734-58-1]; DBU [6674-22-2]; TBD [5807-14-7]; *t*-BuP_1(pyrr) [161118-67-8]; *t*-BuP_1(dma) [81675-81-2]; TMG [80-70-6]. [b] The pK_a value actually corresponds to the compound (4-C_6F_4)(C_6F_5)CHCN but it is expected to be very similar. [c] Computational values from ref 2.